of frequency modulation techniques other than frequency shift keying can be used to transfer the data signals. Moreover, a separate transmitter might be utilized to transmit frequency modulated signals from the telephone to the common equipment, rather than having a single microcomputer perform both the control and transmitting functions. This would still enable the communications over long distances although the cost advantages might not be realized. Therefore, it is the object of the appended claims to cover all such modifications and variations as come within the true spirit and scope of this invention.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A remote unit for performing various control functions and monitoring other functions in response to frequency modulated control data signals conveyed from a central location over a data signal path means, said unit comprising:

A. at least one first function means for performing a predetermined control function in response to the control data signal from the central location, each said first function means responding to the control data when it is constituted by electrical logic signals,

B. at least one second function means for generating electrical logic signals corresponding to control data to be transferred to the central location,

C. decoding means for converting the frequency modulated control data signals into electrical logical signals, and

D. control means interconnecting each said function means and said decoding means, said control means including:

i. a voltage source for generating a voltage,

ii. switching means connected to said voltage source for selectively switching a voltage onto the data signal path means, and

iii. a programmed microcomputer system means including:

(a) a plurality of output signalling means connected to said first function means and to said switching means, and

(b) a plurality of input signalling means connected to said second function means and said decoding means, said microcomputer system means generating, in response to its program, on said output signalling means connected to said switching means a frequency modulated control signal in response to signals at said input signalling means, said switching means being shifted between conductive and nonconductive states in response to the frequency modulated control signal thereby to couple the frequency modulated signals onto the data signal path means.

2. A remote unit as recited in claim **1** wherein said decoding means includes demodulating means for generating electrical logic signals in response to frequency modulated signals, said microcomputer system means including means for receiving the signals from said demodulating means and controlling said first function means in response thereto.

3. A remote unit as recited in claim **2** wherein the control data is conveyed over the data signal path means in a message comprising a predetermined timed sequence of binary digits including a leader for enabling said decoding means to decode incoming frequency-shift-keyed signals, a start digit for synchronizing said decoding means to the incoming message, a predetermined plurality of data digits representing the control data, a parity digit representing the parity of the data digits, and a stop digit for indicating the termination of the message and wherein said microcomputer system means includes means for responding to a message from the data signal path means and means for generating the messages for transfer onto the data signal path means.

4. A remote unit for performing various control functions and monitoring other functions in response to frequency-shift-keyed control data signals conveyed from a central location over a data signal path means, said remote unit comprising:

A. at least one first function means for performing a predetermined control function in response to the control data from the central location, each said first function means responding to the control data when it is constituted by electrical digital signals,

B. at least one second function means for generating electrical digital signals corresponding to control data to be transferred to the central location,

C. decoding means for converting the frequency-shift-keyed control data signals into electrical digital signals, and

D. control means interconnecting each said function means and said decoding means, said control means including:

i. a voltage source for generating a voltage,

ii. switching means connected to said voltage source for selectively switching a voltage onto the second signal path means, and

iii. a programmed microcomputer system means including:

(a) a plurality of output signalling means connected to said first function means and to said switching means, and

(b) a plurality of input signalling means connected to said second function means and said decoding means, said microcomputer system means generating on said output signalling means connected to said switching means a frequency-shift-keyed control signal in response to signals at said input signalling means, said switching means being shifted between conductive and nonconductive states in response to the control signal thereby to couple the frequency-shift-keyed signals onto the data signal path means.

5. A remote unit as recited in claim **4** wherein said decoding means includes demodulating means for generating electrical digital signals in response to frequency-shift-keyed signals, said microcomputer system means including means for receiving the signals from said demodulating means and controlling said first function means in response thereto.

6. A remote unit as recited in claim **5** wherein the control data is conveyed over the data signal path means in a message comprising a predetermined timed sequence of binary digits including a leader for enabling said decoding means to decode incoming frequency-shift-keyed signals, a start digit for synchronizing said decoding means to the incoming message, a predetermined plurality of data digits representing the control data, a parity digit representing the parity of the data digits and a stop digit for indicating the termination of the message and wherein said microcomputer system means includes means for responding to a message from